We claim:

1. A process of generating high hydrophilicity for an artificial fiber fabric, comprising the following steps:
   (a) putting said artificial fiber fabric in a closed tank;
   (b) supplying a gas from a gas source supplying device to said closed tank;
   (c) actuating a plasma exciter to ionize said gas supplied to said closed tank, so as to produce plasma gas; and
   (d) treating said artificial fiber fabric with said produced plasma to modify surfaces of said fabric, so that said fabric shows high moisture absorption and allows rapid natural evaporation of the absorbed moisture.

2. The process as claimed in claim 1, wherein said artificial fiber fabric is selected from a group consisting of tatted fabrics, knitted fabrics, and non-woven fabrics.

3. The process as claimed in claim 2, wherein said artificial fiber fabric is produced with an artificial fiber selected from a group consisting of polyvinyl fiber, polypropylene fiber, polyester fiber, nylon fiber, and acrylic fiber.

4. The process as claimed in claim 1, wherein said artificial fiber fabric includes mix-woven fabric or mixture fabric produced with an artificial fiber and a natural fiber.

5. The process as claimed in claim 1, wherein a pressure in said closed tank for ionizing said gas to produce said plasma is ranged from atmospheric pressure to 30 mtorr.

6. The process as claimed in claim 1, wherein the plasma state gas is selected from a group consisting of argon (Ar), helium (He), nitrogen

(N_2), oxygen (O_2), and ammonia gas (NH_3)

7. The process as claimed in claim 1, wherein the plasma exciter includes radio frequency plasma or microwave frequency plasma.

8. The process as claimed in claim 1, wherein the operating time for surface modification of artificial fiber fabric is ranged from 1 to 120 seconds.

9. The process as claimed in claim 1, wherein the density of oxygen and nitrogen atoms on the surface of the artificial fiber fabric which is surface-modified by plasma increases by 1 to 10% as compared to an unmodified fabric.

10. The process as claimed in claim 1, wherein the artificial fiber fabric which is surface-modified by plasma has a absorbed moisture diffusion velocity of 0.5 to 50 seconds according to JIS L1096-1990.

11. The process as claimed in claim 1, wherein the artificial fiber fabric which is surface-modified by plasma has an absorbed moisture diffusion area that is 1 to 100 times larger than that of the unmodified fabric.

12. The process as claimed in claim 1, wherein artificial fiber fabric which is surface-modified by plasma has a capillary rise height that is 1 to 10 times higher than that of the unmodified fabric.

13. The process as claimed in claim 1, wherein the artificial fiber fabric which is surface-modified by plasma has an absorbed moisture evaporation rate that is 1 to 10 times higher than that of the unmodified fabric.